



VISION WIDE TECH CO., LTD.

No. 1126-2, Bishan Rd., Caotun Township, Nantou 542, Taiwan
Tel: +886-49-2338888
Fax: +886-49-2330083

VISION WIDE (AH) TECH CO., LTD.

No. 1049, Dongcheng Road, Bowang District, Ma'anshan City,
Anhui Province 243131, China
Tel : +86-05552908886

E-mail: info@visionwide.com.tw
www.visionwide-tech.com



F-E-202404



High Efficiency Double Column Machining Center





● B-axis Auto 1° Indexing



Modularization on Auto Multi-angle Machining Accessories

Diversely Modularized Head Attachments for Various Industries

- Heavy cutting: AC 90° head
- Multi-angle cutting: AC 2-axis head
- Deep milling: Extended AC 90° angle head
- Universal extended heads
- Small 90° head



● Small AC 90° Milling Head

● AC 2-axis Head

● AC 90° Angular Head (Strong)

● AC 90° Angular Head

● AC 90° Extended Head

● AC Extended Head

● AC Milling Head

Attachment Magazine

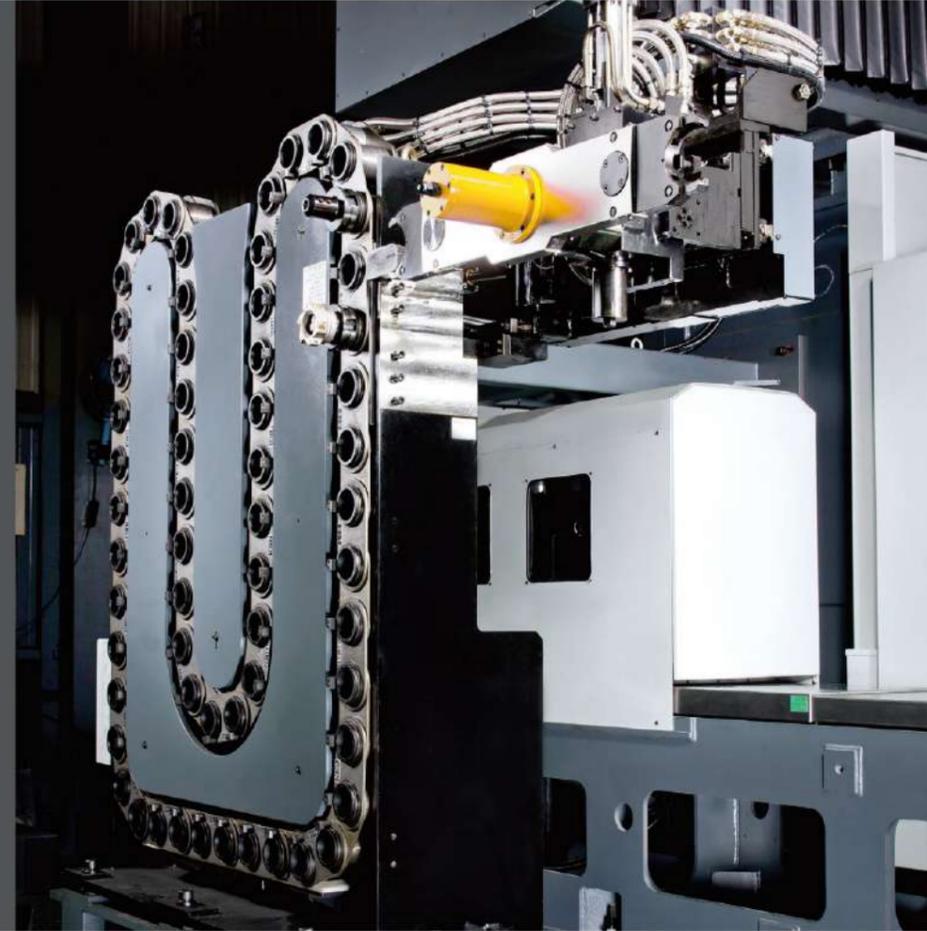
Various Type Tool Magazine



- A Auto swiveling arm type head bracket (on operation side)
- B Multi-heads magazine (at ATC side)
- C Auto swiveling arm type head bracket (on operation side)
- D Manual swiveling arm type head bracket (on operation side)



- Floor-standing vertical-horizontal type tool magazine(opt.)



- Horizontal tool change for AC 90° angular head (opt.)



- Vertical tool change for extended head (opt.)

High Speed.
High Precision.
High Efficiency.

High Efficiency and Performance Double Column Machining Center

Full range of machine specification

- X axis travel NF series: 3,100~10,100 mm
HF series: 4,100~10,100 mm
- Y axis travel NF series: 2,300 / 2,600 / 3,000 / 3,200 / 3,300 / 3,900 mm
HF series: 3,500 / 4,000 / 4,200 / 4,700 mm
- Z axis travel Box way: 920 / 1,020 mm
Linear way 1,000 / 1,200 / 1,400 mm
Enclosed box ram 1,000 / 1,200 / 1,400 mm
- Port width NF series: 2,400 / 2,750 / 3,250 mm
HF series: 3,520 / 4,020 mm



Enclosed sheet metal guard with roof (opt.)

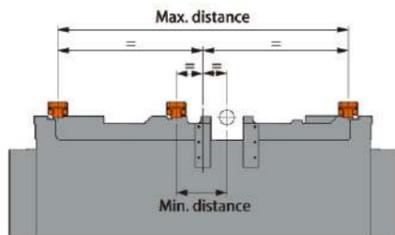


Enclosed sheet metal guard without roof (std.)

High Rigid Structure Design

- Optimal force streamlining in structural design and stress-strain analysis.
- Symmetrical heat conduction in box shape structure.
- MEEHANITE grade casting iron.
- Stress relief heat treatment.
- Parts machining stress eliminated by structure's natural frequency and resonance.
- Large size column gives the beam a strong support.

X-axis with 3 linear guideway



Ballscrew support device

- 3 roller type linear ways in X axis, 30% stiffness higher than ball type.
- Symmetric 3 roller type linear ways, high straightness in full stroke.
- Base with strong box-shape ribs allows the best dynamic accuracy under heavy workpiece load.

DCG, Driving at the Center of Gravity DPR, Dual Positioning Rigidity

Dual ballscrews and servo motors achieve double times of rigidity, and axial thrust driving force, raising 50% positioning accuracy and acceleration speed.

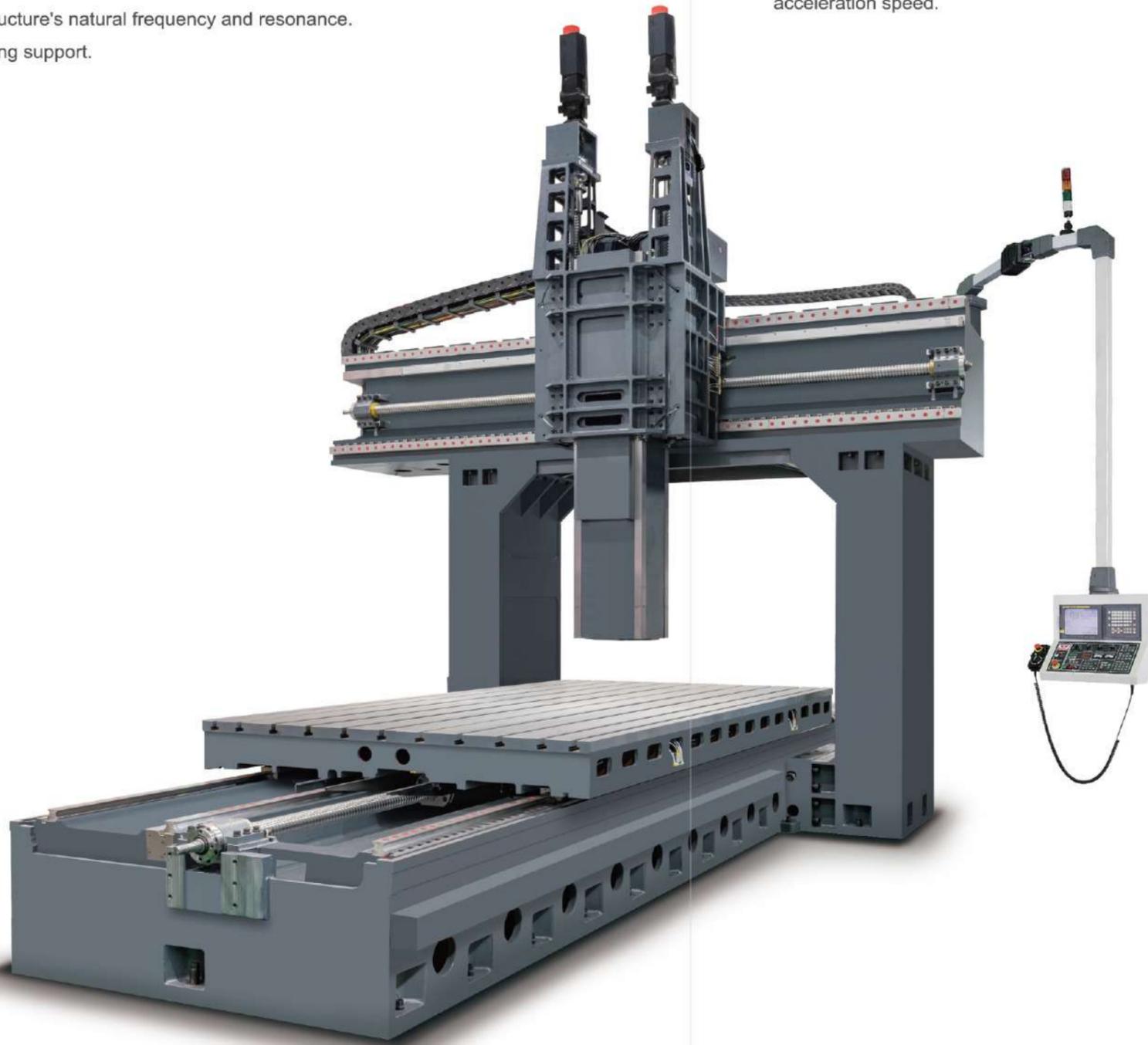
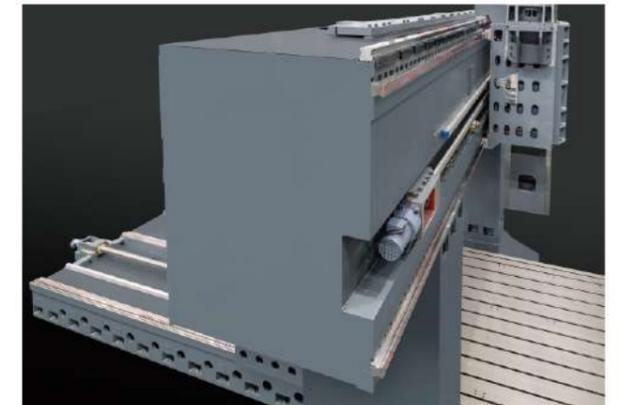


Photo : Z-axis with dual ballscrews (opt.)



Y-axis with 3 linear guideway (opt.)

- More than 1.1m widths of high rigid beam configured with stepper Y-axis of large span provides Y-axis the optimal dynamic straightness and rigidity of cutting.
- Y-axis with ultra-load guide way enhances more than 40% rigidity on higher cutting load and prolongs the lifetime.



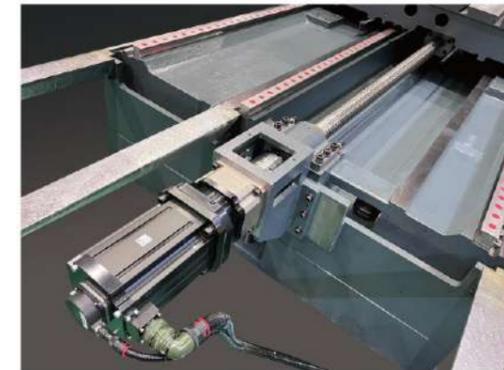
F
SERIES

High Speed.
High Precision.
High Efficiency.

High Precision and High Performance Structure Achieves Best Feeding Thrust and Cutting Rigidity

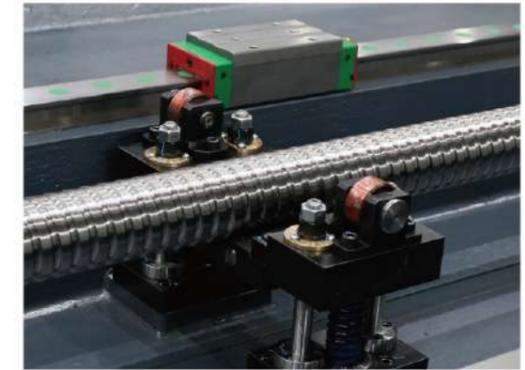
XY Axis with Gear-driven Direct

- Less rotation error between motor and ballscrew
- Higher positioning accuracy
- Higher repeatability
- The gear reducer is adopted in X-axis and Y-axis to ensure the dynamic precision of servo motor and can be transmitted to the precision ballscrew under high loading operation.
- High power motor is configured to offer the maximum feeding thrust.



Ballscrew Supporter

- XY axis precision supporter mechanism prevents the sag of ballscrew, enhances higher positioning accuracy, and ensures ballscrew lifetime (X-axis travel>4m, Y-axis travel>3m)



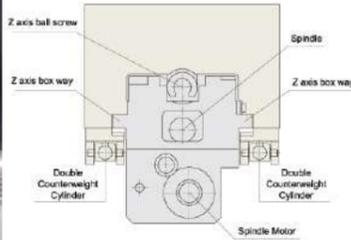
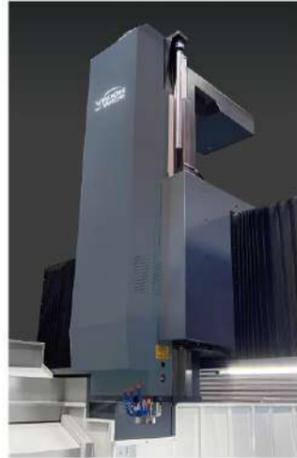
HRT High Responsive Transmission

- Backlash-free gearbox enhanced feeding thrust force.
- The dual thrust bearing support raises up 50% positioning accuracy.
- Low thermal expansion effect, maintain best repetitive accuracy.



Various Spindle Head Options

Box Way (Single Ballscrew)



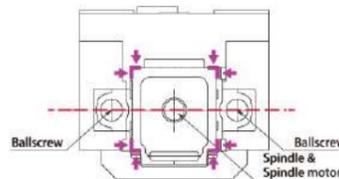
SCG, Symmetrical support at the Center of Gravity

- The guideway is closed to the spindle center to get the best cutting force support.
- The spindle is balanced by two symmetrical counterbalances.
- The spindle is located at the center of gravity of the Z axis.

High acceleration counterbalance driving

- Twin hydraulic cylinders with pressured Nitrogen assistance counterweight System to achieve high acceleration of the Z axis.
- Pressured Nitrogen accumulators with isolated oil and N2 offer saving power and a long lifetime.

Enclosed Box Way (Dual Ballscrews)



DCG, Driving at the Center of Gravity

- The spindle is located at the driving center which is the center of gravity of the Z axis.
- Symmetrical guideway configuration at spindle center.

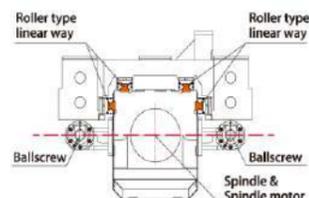
DPR, Dual Positioning Rigidity

- Dual ballscrews and servo motors driving.
- The dual thrust bearing support.
- Dual moving rigidity.
- High acceleration.
- Positioning accuracy increased by 50%

Embracing High damping bearing to allow bigger spindle power up to 30/37kW and 1200Nm transmission.

High Geometric accuracy on Z-axis straightness, less than 0.01mm/1m.

Linear Way (Dual Ballscrews)



DCG, Driving at the Center of Gravity

- The spindle is located at the driving center which is the center of gravity of the Z axis.
- Symmetrical guideway configuration at spindle center.

DPR, Dual Positioning Rigidity

- Dual ballscrews and servo motors driving.
- The dual thrust bearing support.
- Dual moving rigidity.
- High acceleration.
- Positioning accuracy increased by 50%

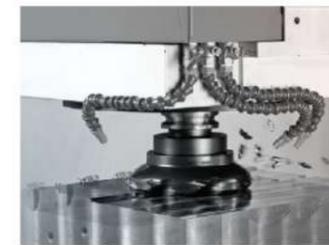
Lowest friction for higher acceleration and high-speed machining and acceleration for Die and mold machining.

Optimal Central Symmetric Spindle System Design Strong, Stable, Durable and Scalability

- Gear spindles are made from Japan-made JIS-0 grade.
- 2-step gear type spindle provides high torque and high speed characteristics to ensure heavy cutting ability on surface finish.
- Various high speed spindle can be chosen
4,000/ 6,000 rpm



Cutting Ability



Face milling:

- Tool dia.:125mm
- Cutting feed:1,000mm/min
- Cutting width:100mm
- Cutting depth:6mm
- Removal rate:600cc/min



High feed machining:

- Tool dia.:40mmx4 inserts
- Cutting speed:2,400rpm
- Cutting feed:10m/min
- Cutting depth:1mm
- Cutting width:32mm
- Removal rate:320cc/min



Indexable insert drilling:

- Tool dia.:32mm
- Cutting speed:1,500rpm
- Cutting feed:500mm/min
- Cutting depth:30mm
- Removal rate:400cc/min
- Coolant through spindle

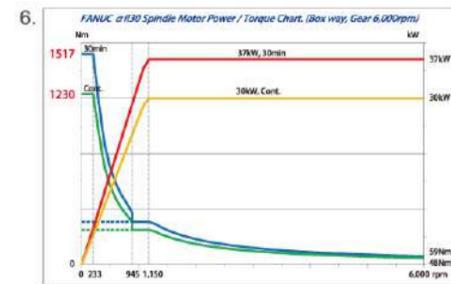
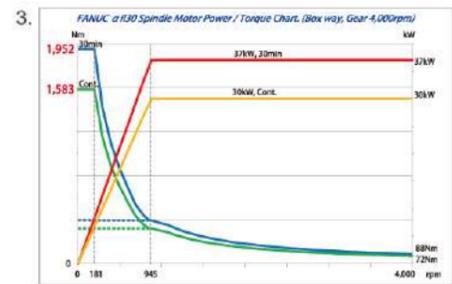
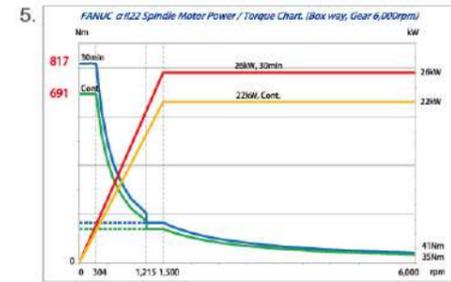
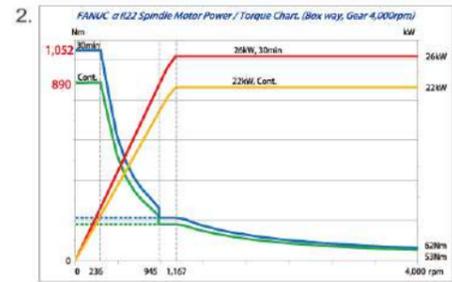
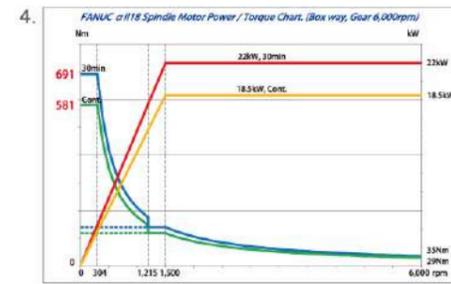
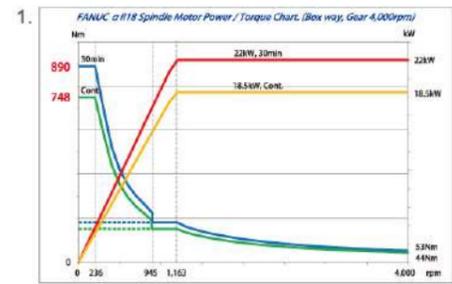
- Test specification: spindle power=22/26kW, speed=4,000rpm, material=S45C(mid carbon steel) position=1/2x (Z travel)

Spindle Power and Torque Charts

Box way/ single ballscrew

FANUC Controller

Drive type	Gear Spindle						
Pic. No.	1	2	3	4	5	6	
Motor type	FANUC α il 18	FANUC α il 22	FANUC α il 30	FANUC α il 18	FANUC α il 22	FANUC α il 30	
Speed	rpm	4,000	4,000	4,000	6,000	6,000	6,000
Power(Cont./30min.)	KW	18.5/ 22	22/ 26	30/ 37	18.5/ 22	22/ 26	30/ 37
Torque (Cont./30min.)	Nm	748.7/ 890	890/ 1052	1583/ 1952	581/ 691	691/ 817	1230/ 1517
Tool type	-	BBT50	BBT50	BBT50	BBT50	BBT50	BBT50

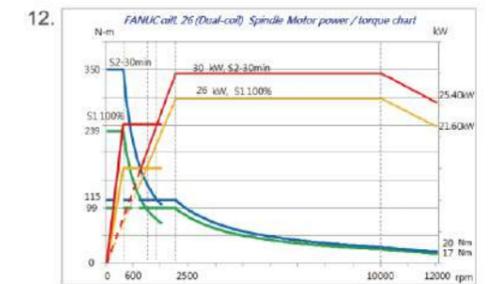
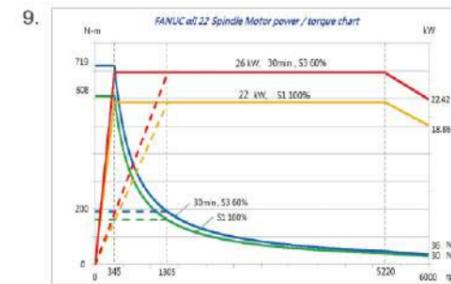
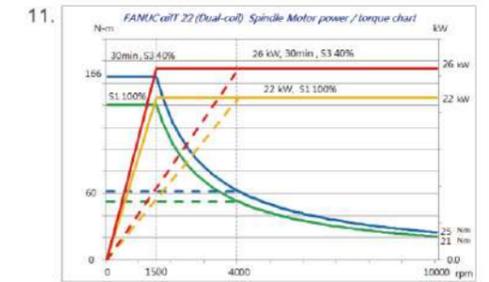
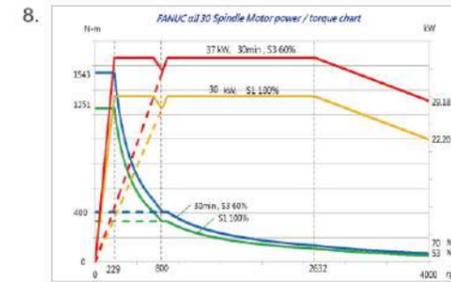
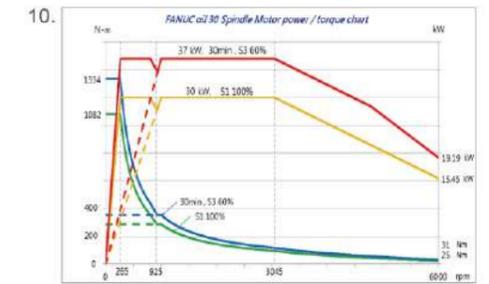
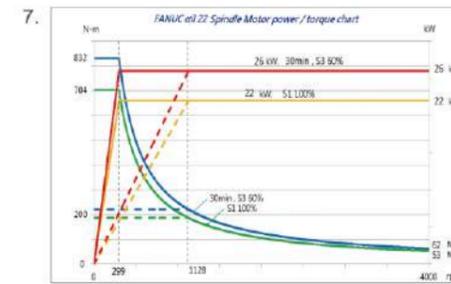


Spindle Power and Torque Charts

Linear way, Enclosed Box Ram/ Dual ballscrews

FANUC Controller

Drive type	Gear Spindle				Direct-Driven Spindle	
Pic. No.	7	8	9	10	11	12
Motor type	-	FANUC α il 22	FANUC α il 30	FANUC α il 22	FANUC α il(T)22	FANUC α il 26
Speed	rpm	4,000	4,000	6,000	6,000	10,000/ 12,000
Power(Cont./30min.)	KW	22/ 26	30/ 37	22/ 26	30/ 37	22/ 26
Torque (Cont./30min.)	Nm	704/ 832	1,251/ 1,543	608/ 719	1,082/ 1,334	L: 140/ 166 H: 53/ 62
Tool type	-	BBT50	BBT50	BBT50	BBT50	BBT50

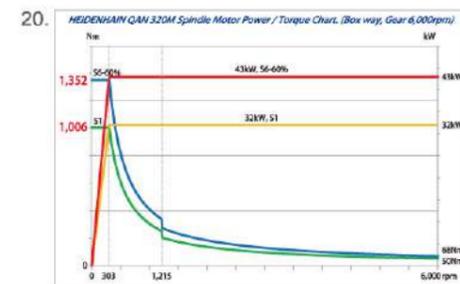
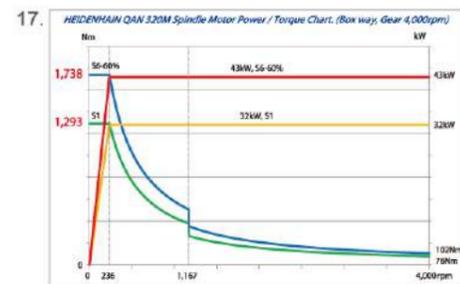
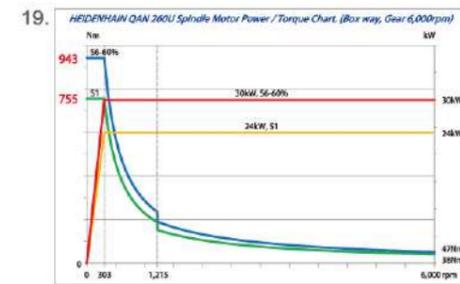
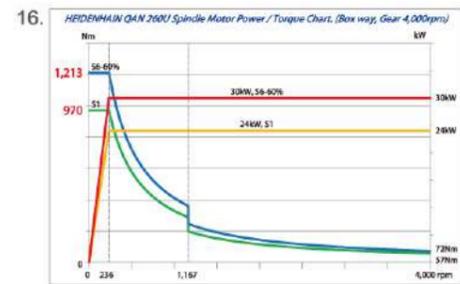
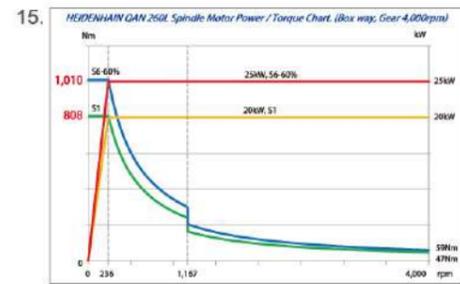


Spindle Power and Torque Charts

Box way/ single ballscrew

HEIDENHAIN Controller

Drive type	Gear Spindle						
Pic. No.	15	16	17	18	19	20	
Motor type	QAN 260L	QAN 260U	QAN 320M	QAN 260L	QAN 260U	QAN 320M	
Speed	rpm	4,000	4,000	4,000	6,000	6,000	6,000
Power(Cont./30min.)	KW	20/ 25	24/ 30	32/ 43	20/ 25	24/ 30	32/ 43
Torque(Cont./30min.)	Nm	808/ 1,010	970/ 1,213	1,293/ 1,738	628/ 786	755/ 943	1,006/ 1,352
Tool type	-	BBT-50	BBT-50	BBT-50	BBT-50	BBT-50	BBT-50

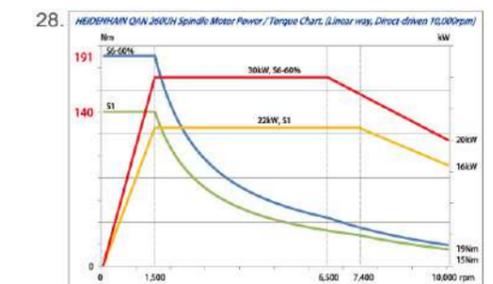
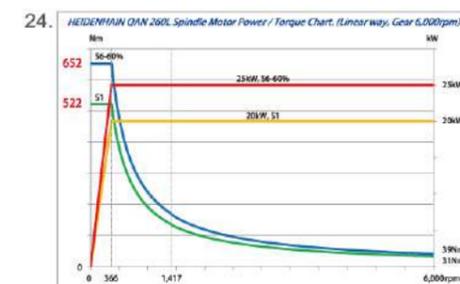
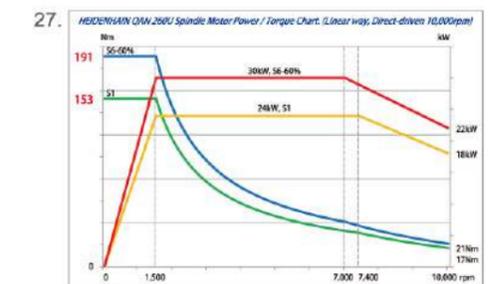
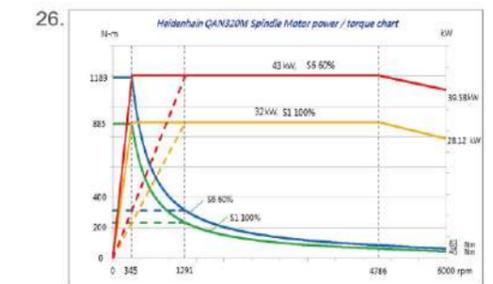
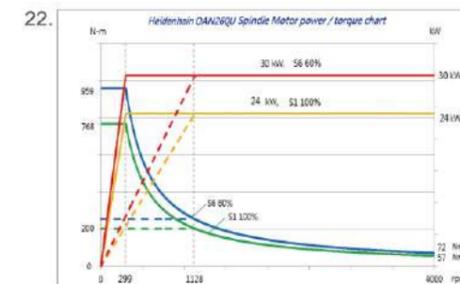
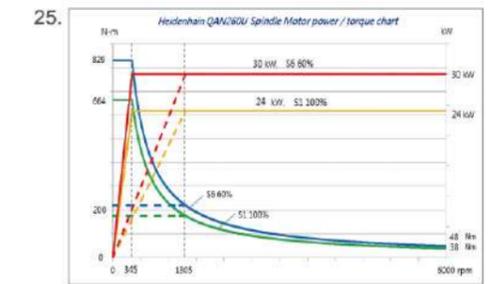
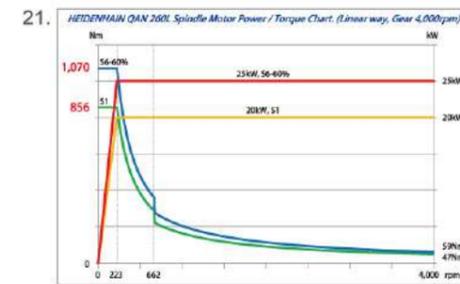


Spindle Power and Torque Charts

Linear way, Enclosed Box Ram/ Dual ballscrews

HEIDENHAIN Controller

Drive type	Gear Spindle							Direct-Driven Spindle	
Pic. No.	21	22	23	24	25	26	27	28	
Motor type	QAN 260L	QAN 260U	QAN 320M	QAN 260L	QAN 260U	QAN 320M	QAN 260U	QAN 260UH	
Speed	rpm	4,000	4,000	4,000	6,000	6,000	6,000	10,000	10,000
Power(Cont./30min.)	KW	20/ 25	24/ 30	32/ 43	20/ 25	24/ 30	32/ 43	24/ 30	22/ 30
Torque(Cont./30min.)	Nm	856/ 1,070	768/ 959	1,023/ 1,375	522/ 652	664/ 829	885/ 1,189	153/ 191	140/ 191
Tool type	-	BBT-50	BBT-50	BBT-50	BBT-50	BBT-50	BBT-50	BBT-50	BBT-50

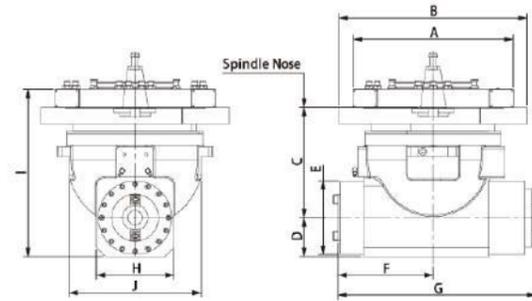


Auto Multi-Angle Head Attachment

AC 90° angular head



Item	AC 90° angular head	
	G2	G4
Max. speed	3,000rpm	5,000rpm
Max. power	26kW	
Tool clamping	Auto hydraulic clamping	
Head clamping	Auto hydraulic clamping	
C-axis indexing	Auto 1°/5°	Auto 1°/2.5°/5°
Machining coolant	External nozzle	Spindle nose nozzle
Coolant Through Spindle(opt.)	20 bar. / 70 bar.	20 bar. / 70 bar.
A	Ø436	Ø325
B	Ø436	Ø420
C	300	279.5
D	100	100
E	Ø200	Ø200
F	259	259.5
G	515.7	501
H	212	216
I	486	432.3
J	Ø352	Ø346

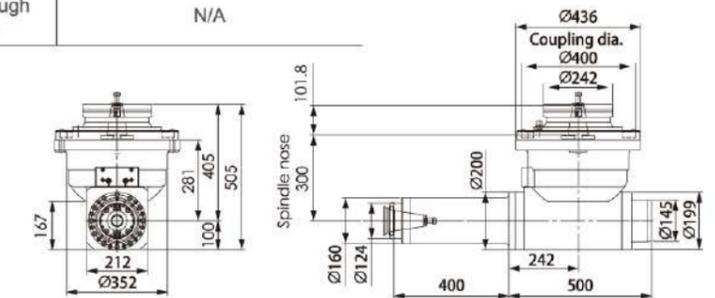


Powerful and Precision Boring Head Attachment

400mm AC 90° spindle extension head



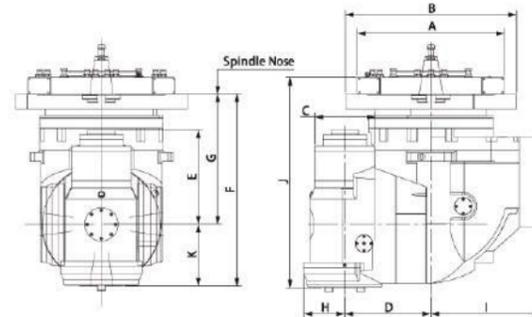
Item	400mm AC 90° spindle extension head	
	G2	
Max. speed	2000 rpm	
Max. power	26 kW	
Tool clamping	Manual hydraulic clamping	
Head clamping	Auto hydraulic clamping	
C-axis indexing	(1°) / 5°	
Machining coolant	External nozzle	
Coolant Through Spindle(opt.)	N/A	



AC 2-axis head



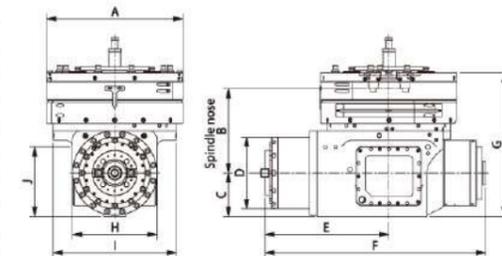
Item	AC 2-axis head	
	G2	G4
Max. speed	3,000rpm	5,000rpm
Max. power	26kW	
Tool clamping	Auto hydraulic clamping	
Head clamping	Auto hydraulic clamping	
C-axis indexing	Auto 1°	Auto 1°/2.5°/5°
B-axis indexing	Auto 5°	Auto 1°/2.5°/5°
Machining coolant	External nozzle	Spindle nose nozzle
Coolant Through Spindle(opt.)	20 bar. / 70 bar.	20 bar. / 70 bar.
A	Ø436	Ø325
B	Ø436	Ø420
C	Ø200	Ø202
D	350	165
E	300	274
F	573.5	572
G	388.5	387
H	122.5	101
I	329.5	259
J	627.3	621
K	259	185



AC 90° angular head (Strong)



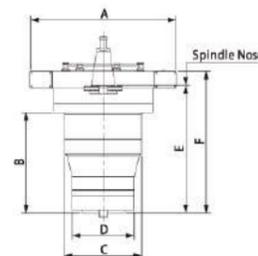
Item	AC 90° angular head (Strong)	
	G2	G4
Max. speed	3,000 rpm	3,000 rpm
Max. power	26 kW	26 kW
Tool clamping	Auto hydraulic clamping	Auto hydraulic clamping
Head clamping	Auto hydraulic clamping	Auto hydraulic clamping
C-axis indexing	Auto 1°/5°	Auto 1°/2.5°/5°
Machining coolant	External nozzle	External nozzle
Coolant Through Spindle(opt.)	N/A	20/50 Bar
A	Ø436	Ø420
B	300	259
C	122.5	133
D	Ø210	Ø220
E	381.5	381.5
F	638.2	679.6
G	528	441
H	250	260
I	Ø352	Ø380
J	207	213



AC extended head



Item	AC extended head 300mm		AC extended head 420mm	
	G2	G4	G2	G4
Max. speed	4,000rpm	5,000rpm	4,000rpm	5,000rpm
Max. power	26kW			
Tool clamping	Auto hydraulic clamping			
Head clamping	Auto hydraulic clamping			
C-axis indexing	Auto 1°			
Machining coolant	External nozzle	Spindle nose nozzle	External nozzle	Spindle nose nozzle
Coolant Through Spindle (opt.)	N / A	20 bar. / 70 bar.	20 bar. / 70 bar.	20 bar. / 70 bar.
A	Ø436	Ø420	Ø436	Ø420
B	300	300	427	427
C	Ø230	Ø230	Ø230	Ø230
D	Ø185	Ø185	Ø185	Ø185
E	374	384	501	501
F	423	422.5	570	550



Intelligent Multi-face Machining

5-axis level tool point center management TPCM

Each type of head attachment with tool center point management, takes vertical workpiece as origin benchmark, and converts the workpiece coordinates to any new specified plane of workpiece coordinates automatically.

Auto coordinates tool axis 3D conversion

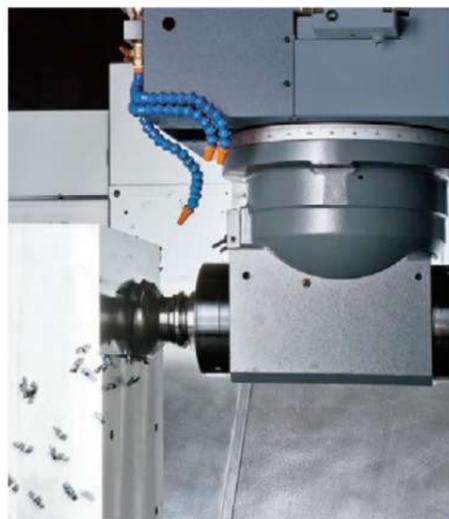
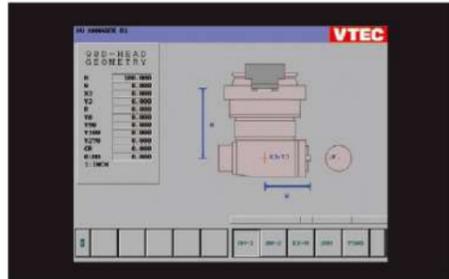
3-axis mechanical coordinates system can be automatically converted to machining coordinates system, easily achieving face milling, end milling, drilling and rigid tapping machining operations in different direction.

Head attachment dimensions correction

Intelligent compensation on each type of head attachments. The compensation including rotation center, tool size, workpiece coordinates system correction management. It greatly simplifies the complexity of programming and operation to achieve perfect auto multi-angle machining.



Auto Compensation Software



Auto compensation for attachment heads:

Auto compensating horizontal head center and spindle center.
Auto compensating mechanism mass center and revolution center.

3D coordinates management:

- 1.V/H tool length and diameter compensation.
- 2.V/H working coordinate affine transformation.
- 3.manual interrupting.
- 4.3D rigid tapping.

Heavy cutting ability

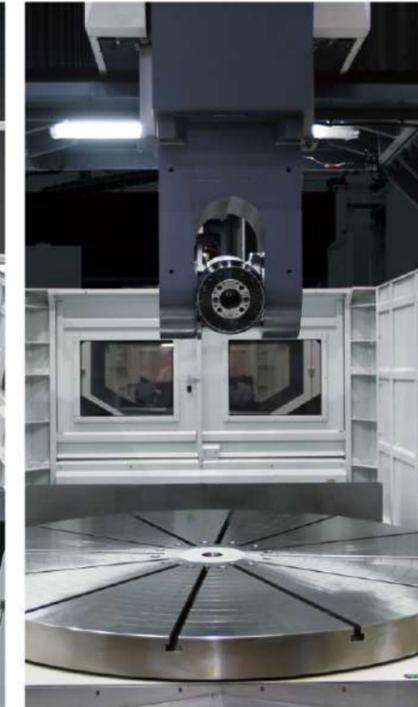
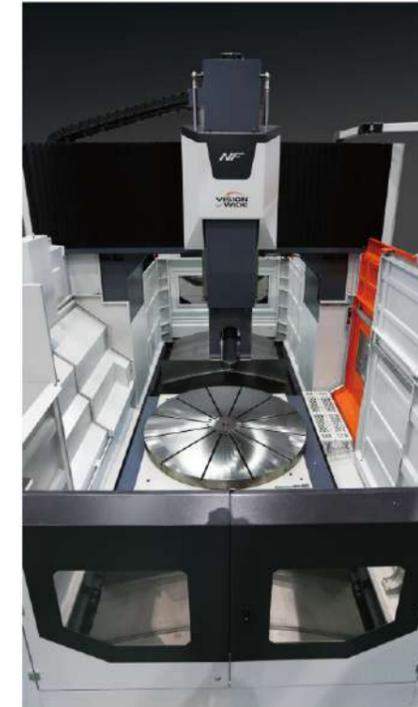
Cutting depth test demonstrated excellent heavy cutting rigidity

test specification: 22/26kW 4,000rpm spindle

Head attachment	Extended head	90 degree angular head	2-axis head
Tool type	BT-50 face milling tool-diameter ϕ 125/5 edge		
Cutting material	S45C	S45C	
Spindle speed(rpm)	600	600	
Feed rate(mm/min)	1,000	1,000	
Machining width(mm)	100	100	
Machining depth	4	5	
Removal rate(cc/min)	400	500	

* The cutting capacity of the G2 series AC head.

Double Column Machining Center Configures a Large Rotary Table Design



X axis	mm	2,200
Y axis	mm	2,300
Z axis	mm	1,400
Distance from Horizontal Spindle Nose to Table	mm	118~1,518
Distance from Vertical Spindle Nose to Table	mm	431~1,831
Table Dimension	mm	ϕ 1,800
Table Load (Central Region)	kg	3,000
Min division accuracy	degree	0.001
Rated Torque	Nm	2,040
Max. Torque	Nm	3,800
Braking Torque	Nm	10,210
Max. Cutting Torque under Braking	Nm	7,000



Tool clamping type	Auto-hydraulic clamping
Head clamping type	Fixed
C axis angle	Fixed
B axis angle	$\pm 110^\circ$
B axis index	1°
Indexing precision	$\pm 0.03/300$ mm
Indexing function	Auto angle positioning (B axis)
Lubrication	Bearing oil-air lubrication
CTS function	Available for 20/50 bar.
Spindle cooling	Oil cooling circulation
Max. cutting Power	26kW
Spindle speed	4,000rpm

Auto Head Storage Unit



● Table type head bracket



● Auto swiveling arm type head bracket (on operation side)

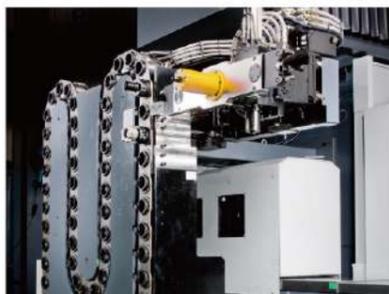


● Manual swiveling arm type head bracket (on operation side)



● Multi-heads magazine (magazine side)

Tool Magazine



● Floor-standing vertical-horizontal type tool magazine (opt.)



● Extended head exchange on vertical type (opt.)



● Auto tool exchange, tool to tool 3 sec. in vertical type



● Vertical type tool magazine for less floor space, 32 tools magazine (40/ 60 tools opt.)



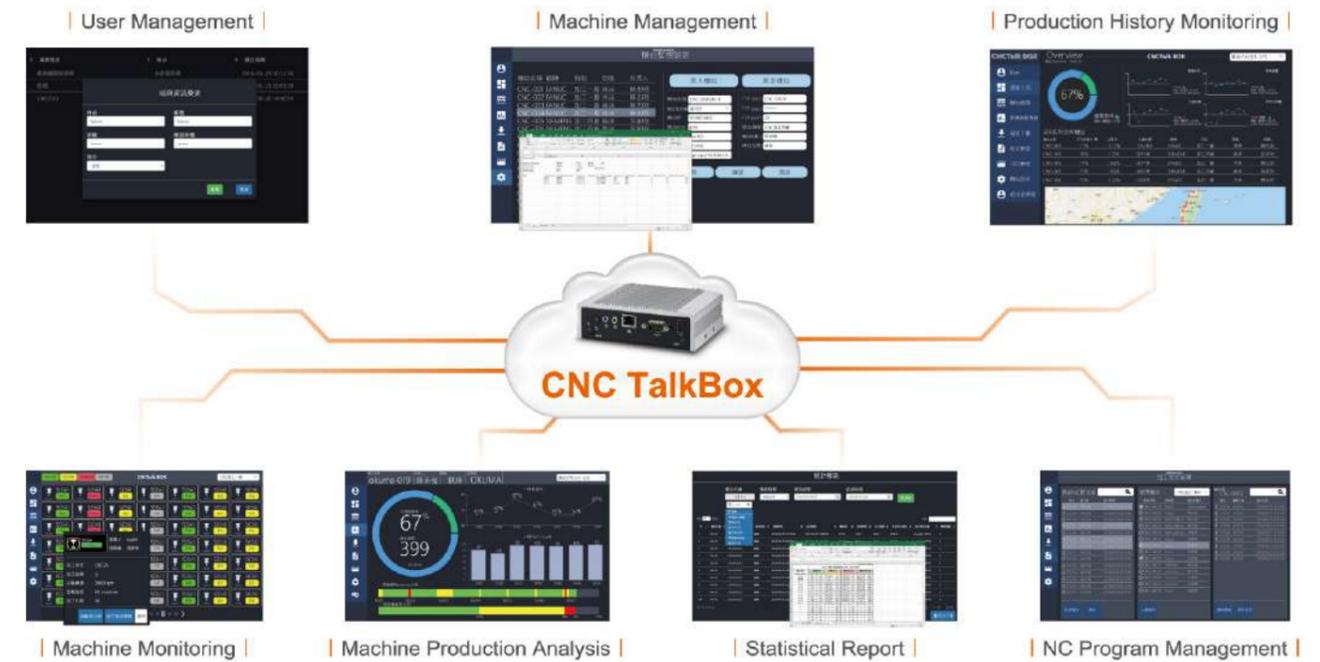
● Floor-standing vertical type tool magazine (opt.)



● Tool length measurement device at magazine side for mold cutting to change tool fast (opt.)

CNC TalkBox

Monitoring Software for Supporting Multiple Controllers
Make Production Management Clear at A Glance



Intelligent Factory Management Can Be in Everywhere

CNC TalkBox possesses computing, storage and industrial Internet functions. After computing, the production information can be uploaded to the cloud database or mobile devices to achieve the less hardware managements and the optimal mobile data exchanging capacity.

Economic

Small hardware devices for rapid introduction of industrial Internet of Things (IoT).

Stable

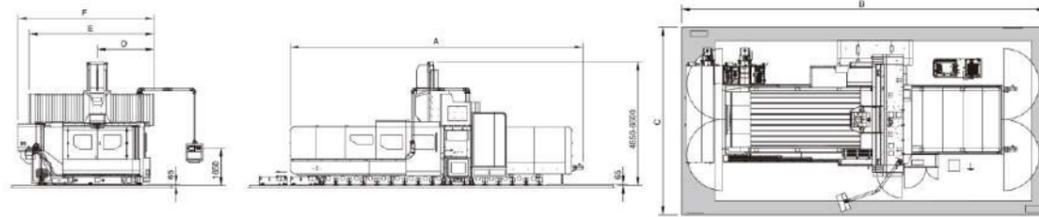
Timely record of production log is a benefit to analyze process and increase production capacity.

Expandable

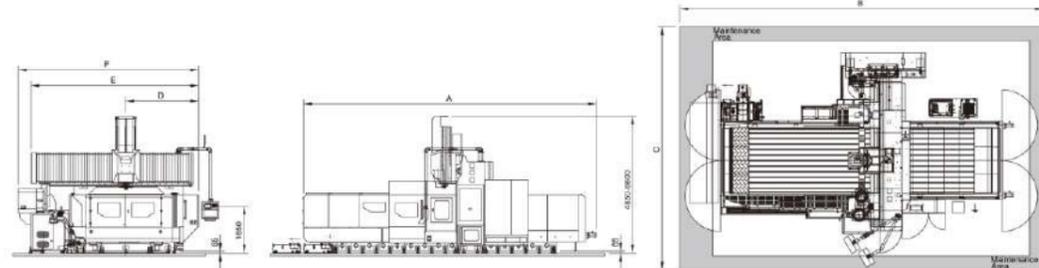
Complete data collection can make better decisions for process, dispatch, tool and material management.

Machine Dimension | NF series

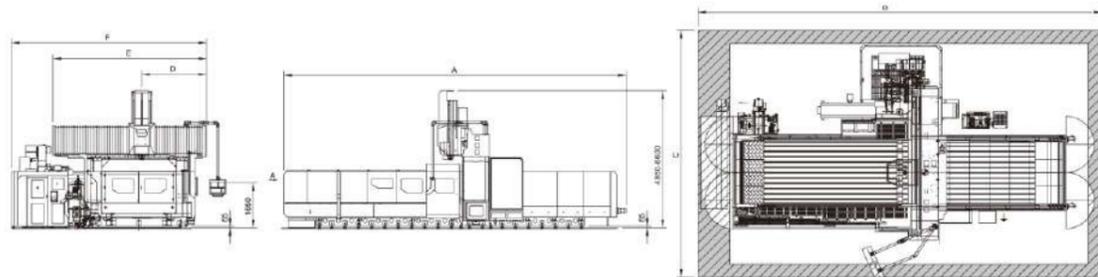
● NF-xx23/xx26/xx32 (vertical type tool change)



● NF-xx30/xx33/xx39 (floor-standing vertical type tool change)



● NF-xx30/xx33/xx39 (floor-standing vertical-horizontal type tool change)



Unit:mm

NF-xx23/xx26/xx32
(vertical type tool change)

MODEL	A	B	C	D	E	F
NF-XX23						
NF-3023	8,800	11,200				
NF-4023	10,800	13,200				
NF-5023	12,800	15,200	6,800	2,050	4,600	5,000
NF-6023	14,800	17,200				
NF-8023	19,900	22,000				
NF-10023	23,900	26,000				
NF-XX26						
NF-3026	8,800	11,200				
NF-4026	10,800	13,200				
NF-5026	12,800	15,200	7,200	2,250	4,900	5,400
NF-6026	14,800	17,200				
NF-8026	19,900	22,000				
NF-10026	23,900	26,000				
NF-XX32						
NF-3032	8,800	11,200				
NF-4032	10,800	13,200				
NF-5032	12,800	15,200	7,800	2,650	5,800	6,200
NF-6032	14,800	17,200				
NF-8032	19,900	22,000				
NF-10032	23,900	26,000				

NF-xx30/xx33/xx39
(floor-standing vertical type tool change)

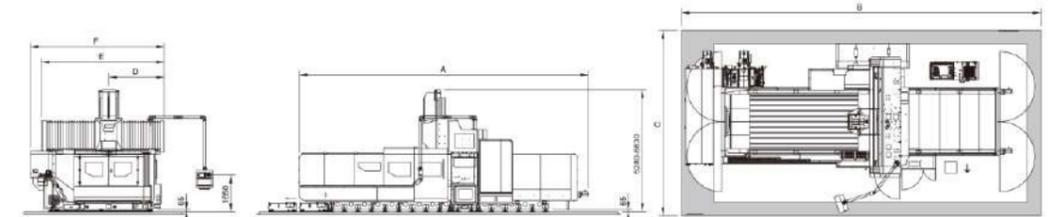
MODEL	A	B	C	D	E	F
NF-XX30						
NF-3030	8,800	11,200				
NF-4030	10,800	13,200				
NF-5030	12,800	15,200	8,500	2,500	5,600	6,100
NF-6030	14,800	17,200				
NF-8030	19,900	22,000				
NF-10030	23,900	26,000				
NF-XX33						
NF-3033	8,800	11,200				
NF-4033	10,800	13,200				
NF-5033	12,800	15,200	8,800	2,700	6,100	6,600
NF-6033	14,800	17,200				
NF-8033	19,900	22,000				
NF-10033	23,900	26,000				
NF-XX39						
NF-3039	8,800	11,200				
NF-4039	10,800	13,200				
NF-5039	12,800	15,200	9,400	3,000	6,800	7,400
NF-6039	14,800	17,200				
NF-8039	19,900	22,000				
NF-10039	23,900	26,000				

NF-xx30/xx33/xx39
(floor-standing vertical-horizontal type tool change)

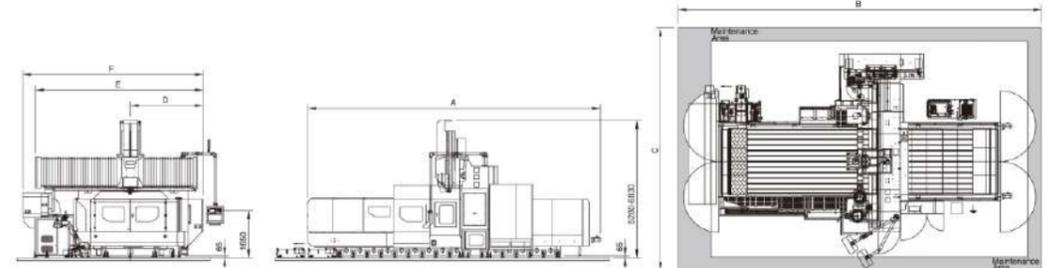
MODEL	A	B	C	D	E	F
NF-XX30						
NF-3030	8,800	11,200				
NF-4030	10,800	13,200				
NF-5030	12,800	15,200	9,000	2,300	5,300	6,900
NF-6030	14,800	17,200				
NF-8030	19,900	22,000				
NF-10030	23,900	26,000				
NF-XX33						
NF-3033	8,800	11,200				
NF-4033	10,800	13,200				
NF-5033	12,800	15,200	9,300	2,500	5,800	7,400
NF-6033	14,800	17,200				
NF-8033	19,900	22,000				
NF-10033	23,900	26,000				
NF-XX39						
NF-3039	8,800	11,200				
NF-4039	10,800	13,200				
NF-5039	12,800	15,200	10,000	2,800	6,400	8,100
NF-6039	14,800	17,200				
NF-8039	19,900	22,000				
NF-10039	23,900	26,000				

HF series

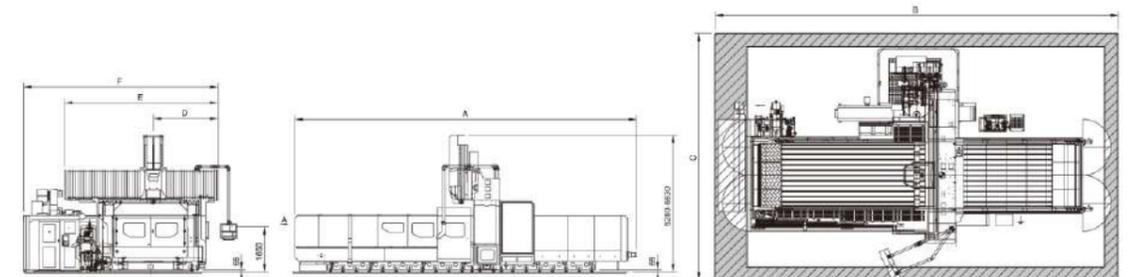
● HF-xx35/xx40 (vertical type tool change)



● HF-xx42/xx47 (floor-standing vertical type tool change)



● HF-xx42/xx47 (floor-standing vertical-horizontal type tool change)



Unit:mm

HF-xx35/xx40
(vertical type tool change)

MODEL	A	B	C	D	E	F
HF-4035	10,600	14,000				
HF-5035	13,000	16,000				
HF-6035	15,000	18,000	8,200	2,570	5,850	6,050
HF-8035	19,250	23,000				
HF-10035	23,250	28,000				
HF-4040	10,600	14,000				
HF-5040	13,000	16,000				
HF-6040	15,000	18,000	8,700	2,820	6,350	6,550
HF-8040	19,250	23,000				
HF-10040	23,250	28,000				

HF-xx42/xx47
(floor-standing vertical type tool change)

MODEL	A	B	C	D	E	F
HF-4042	10,600	14,000				
HF-5042	13,000	16,000				
HF-6042	15,000	18,000	9,800	2,880	6,400	7,450
HF-8042	19,250	23,000				
HF-10042	23,250	28,000				
HF-4047	10,600	14,000				
HF-5047	13,000	16,000				
HF-6047	15,000	18,000	10,300	3,130	6,900	7,950
HF-8047	19,250	23,000				
HF-10047	23,250	28,000				

HF-xx42/xx47
(floor-standing vertical-horizontal type tool change)

MODEL	A	B	C	D	E	F
HF-4042	10,600	14,000				
HF-5042	13,000	16,000				
HF-6042	15,000	18,000	10,000	2,880	6,400	7,650
HF-8042	19,250	23,000				
HF-10042	23,250	28,000				
HF-4047	10,600	14,000				
HF-5047	13,000	16,000				
HF-6047	15,000	18,000	10,500	3,130	6,900	8,150
HF-8047	19,250	23,000				
HF-10047	23,250	28,000				

NF Specification | NF-xx23/30 Series

MODEL	Unit	NF-3023/ NF-3030	NF-4023/ NF-4030	NF-5023/ NF-5030	NF-6023/ NF-6030	NF-8023/ NF-8030	NF-10023/ NF-10030	
TRAVEL								
X axis travel	mm	3,100	4,100	5,100	6,100	8,100	10,100	
Y axis travel	mm	2,300 / 3,000						
Z axis travel	mm	920 / 1,020(Opt.)						
	Box way / single ballscrew	1,000(Opt.) / 1,200(Opt.) / 1,400(Opt.)						
Distance from spindle nose to table	Box way / single ballscrew(2-step gear)	Z axis=920	150~1,070 (Standard Column)			100~1,020 (Standard Column)		
		Z axis=1,020	250~1,270 (Column Heightened 200 mm)			200~1,220 (Column Heightened 200mm)		
	Linear way, Enclosed Box Ram / Dual ballscrews (2-step gear/Direct-driven)	Z axis=1,000	150~1,150 (Standard Column)			100~1,100 (Standard Column)		
		Z axis=1,200	150~1,350 (Column Heightened 200 mm)			100~1,300 (Column Heightened 200mm)		
	Z axis=1,400	150~1,550 (Column Heightened 400 mm)			100~1,500 (Column Heightened 400mm)			
Distance between columns	mm	2,400						
TABLE								
Table size (X direction x Y direction)	mm	3,000 x 2,050	4,000 x 2,050	5,000 x 2,050	6,000 x 2,050	8,000 x 2,050	10,000 x 2,050	
T-slot (width x number x pitch)	mm	28 x 11 x 200 (150)						
Max. table load	kg	15,000	18,000	20,000	22,000	24,000	26,000	
SPINDLE								
Spindle speed	Box way/single ballscrew	2-step gear	4,000 / 6,000(Opt.)					
	Linear way & enclosed box ram / dual ballscrews	2-step gear	4,000(Opt.) / 6,000(Opt.)					
		Direct driven	10,000(Opt.)					
Spindle power (cont. / 30 min.)	kW	18.5 / 22(22 / 26 Opt.)(30 / 37 Opt.)						
Spindle taper	-	BBT-50						
FEED								
Cutting feed rate	mm/min	1~10,000	1~10,000	1~10,000	1~10,000	1~7,000	1~7,000	
Rapid traverse	X/Y(Y+700)		m/min	20 / 20 (15)	18 / 20 (15)	12.5 / 20 (15)	10 / 20 (15)	8 / 20 (15)
	Z axis	Box way / single ballscrew	m/min	15				
		Linear way / dual ballscrews	m/min	12				
	Enclosed box ram / dual ballscrews	m/min	12					
ACCURACY								
Positioning accuracy (JIS B6333)	mm	±0.010 / Full travel	±0.010 / Full travel	±0.010 / Full travel	±0.012 / Full travel	±0.012 / Full travel	±0.015 / Full travel	
Positioning accuracy (ISO-230-2 & VDI 3441)	mm	P0.022	P0.022	P0.032	P0.042	P0.042	P0.045	
Repeatability (JIS B6333)	mm	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003	
Repeatability (ISO-230-2 & VDI 3441)	mm	Ps0.016	Ps0.016	Ps0.025	Ps0.033	Ps0.033	Ps0.035	
ATC 1								
Tool magazine capacity	Vertical type tool change	pcs	32 / 40(Opt.) / 60(Opt.)					
	Floor-standing vertical type tool change	pcs	32(Opt.) / 40(Opt.) / 60(Opt.)					
	Floor-standing vertical-horizontal type tool change	pcs	32(Opt.) / 40(Opt.) / 60(Opt.)					
Max. tool diameter (full / next pockets empty)	mm	∅125 / ∅245						
Max. tool length	mm	450						
Max. tool weight	kg	20						
Tool shank	-	BBT-50						
Pull stud	-	P50T-1						
GENERAL								
Power requirement	kVA	60						
Pneumatic requirement	kg/cm ²	6						
Machine net weight 2	kg	30,400 / 32,500	35,800 / 37,800	41,100 / 43,200	46,000 / 48,000	59,200 / 61,500	68,300 / 70,600	
Floor space 3 (LxWxH)	Vertical type tool change	m	11.2 x 6.8 x 4.9	13.2 x 6.8 x 4.9	15.2 x 6.8 x 4.9	17.2 x 6.8 x 4.9	22 x 6.8 x 4.9	26 x 6.8 x 4.9
	Floor-standing vertical type tool change	m	11.2 x 8.5 x 4.9	13.2 x 8.5 x 4.9	15.2 x 8.5 x 4.9	17.2 x 8.5 x 4.9	22 x 8.5 x 4.9	26 x 8.5 x 4.9
	Floor-standing vertical-horizontal type tool change	m	11.2 x 9.0 x 5.2	13.2 x 9.0 x 5.2	15.2 x 9.0 x 5.2	17.2 x 9.0 x 5.2	22 x 9.0 x 5.2	26 x 9.0 x 5.2

Note: 1. Max. pocket support torque: 2.5 kgf-m
 2. Machine weight is for standard machine and is subject to variation according to the accessories selected.
 3. Machine height is for the standard Z axis configuration (box way / single ball screw), which will be affected by the configuration of Z axis.
 For machine height of other models, please contact the relevant personnel.

NF Specification | NF-xx26/33 Series

MODEL	Unit	NF-3026/ NF-3033	NF-4026/ NF-4033	NF-5026/ NF-5033	NF-6026/ NF-6033	NF-8026/ NF-8033	NF-10026/ NF-10033	
TRAVEL								
X axis travel	mm	3,100	4,100	5,100	6,100	8,100	10,100	
Y axis travel	mm	2,600 / 3,300						
Z axis travel	mm	920 / 1,020(Opt.)						
	Box way / single ballscrew	1,000(Opt.) / 1,200(Opt.) / 1,400(Opt.)						
Distance from spindle nose to table	Box way / single ballscrew(2-step gear)	Z axis=920	150~1,070 (Standard Column)			100~1,020 (Standard Column)		
		Z axis=1,020	250~1,270 (Column Heightened 200 mm)			200~1,220 (Column Heightened 200mm)		
	Linear way, Enclosed Box Ram / Dual ballscrews (2-step gear/Direct-driven)	Z axis=1,000	150~1,150 (Standard Column)			100~1,100 (Standard Column)		
		Z axis=1,200	150~1,350 (Column Heightened 200 mm)			100~1,300 (Column Heightened 200mm)		
	Z axis=1,400	150~1,550 (Column Heightened 400 mm)			100~1,500 (Column Heightened 400mm)			
Distance between columns	mm	2,750						
TABLE								
Table size (X direction x Y direction)	mm	3,000 x 2,450	4,000 x 2,450	5,000 x 2,450	6,000 x 2,450	8,000 x 2,450	10,000 x 2,450	
T-slot (width x number x pitch)	mm	28 x 13 x 200 (150)						
Max. table load	kg	15,000	18,000	20,000	22,000	24,000	26,000	
SPINDLE								
Spindle speed	Box way/single ballscrew	2-step gear	4,000 / 6,000(Opt.)					
	Linear way & enclosed box ram / dual ballscrews	2-step gear	4,000(Opt.) / 6,000(Opt.)					
		Direct driven	10,000(Opt.)					
Spindle power (cont. / 30 min.)	kW	18.5 / 22(22 / 26 Opt.)(30 / 37 Opt.)						
Spindle taper	-	BBT-50						
FEED								
Cutting feed rate	mm/min	1~10,000	1~10,000	1~10,000	1~10,000	1~7,000	1~7,000	
Rapid traverse	X/Y(Y+700)		m/min	20 / 20 (15)	18 / 20 (15)	12.5 / 20 (15)	10 / 20 (15)	8 / 20 (15)
	Z axis	Box way / single ballscrew	m/min	15				
		Linear way / dual ballscrews	m/min	12				
	Enclosed box ram / dual ballscrews	m/min	12					
ACCURACY								
Positioning accuracy (JIS B6333)	mm	±0.010 / Full travel	±0.010 / Full travel	±0.010 / Full travel	±0.012 / Full travel	±0.012 / Full travel	±0.015 / Full travel	
Positioning accuracy (ISO-230-2 & VDI 3441)	mm	P0.022	P0.022	P0.032	P0.042	P0.042	P0.045	
Repeatability (JIS B6333)	mm	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003	
Repeatability (ISO-230-2 & VDI 3441)	mm	Ps0.016	Ps0.016	Ps0.025	Ps0.033	Ps0.033	Ps0.033	
ATC 1								
Tool magazine capacity	Vertical type tool change	pcs	32 / 40(Opt.) / 60(Opt.)					
	Floor-standing vertical type tool change	pcs	32(Opt.) / 40(Opt.) / 60(Opt.)					
	Floor-standing vertical-horizontal type tool change	pcs	32(Opt.) / 40(Opt.) / 60(Opt.)					
Max. tool diameter (full / next pockets empty)	mm	∅125 / ∅245						
Max. tool length	mm	450						
Max. tool weight	kg	20						
Tool shank	-	BBT-50						
Pull stud	-	P50T-1						
GENERAL								
Power requirement	kVA	60						
Pneumatic requirement	kg/cm ²	6						
Machine net weight 2	kg	36,400 / 38,400	41,400 / 43,900	46,400 / 48,900	51,000 / 53,900	60,000 / 63,900	69,000 / 73,900	
Floor space 3 (LxWxH)	Vertical type tool change	m	11.2 x 7.2 x 4.9	13.2 x 7.2 x 4.9	15.2 x 7.2 x 4.9	17.2 x 7.2 x 4.9	22 x 7.2 x 4.9	26 x 7.2 x 4.9
	Floor-standing vertical type tool change	m	11.2 x 8.8 x 4.9	13.2 x 8.8 x 4.9	15.2 x 8.8 x 4.9	17.2 x 8.8 x 4.9	22 x 8.8 x 4.9	26 x 8.8 x 4.9
	Floor-standing vertical-horizontal type tool change	m	11.2 x 9.3 x 5.2	13.2 x 9.3 x 5.2	15.2 x 9.3 x 5.2	17.2 x 9.3 x 5.2	22 x 9.3 x 5.2	26 x 9.3 x 5.2

Note: 1. Max. pocket support torque: 2.5 kgf-m
 2. Machine weight is for standard machine and is subject to variation according to the accessories selected.
 3. Machine height is for the standard Z axis configuration (box way / single ball screw), which will be affected by the configuration of Z axis.
 For machine height of other models, please contact the relevant personnel.

NF Specification | NF-xx32/39 Series

MODEL	Unit	NF-3032/ NF-3039	NF-4032/ NF-4039	NF-5032/ NF-5039	NF-6032/ NF-6039	NF-8032/ NF-8039	NF-10032/ NF-10039	
TRAVEL								
X axis travel	mm	3,100	4,100	5,100	6,100	8,100	10,100	
Y axis travel	mm	3,200 / 3,900						
Z axis travel	Box way / single ballscrew	920 / 1,020(Opt.)						
	Linear way, Enclosed Box Ram/Dual ballscrews	1,000(Opt.) / 1,200(Opt.) / 1,400(Opt.)						
Distance from spindle nose to table	Box way/ single ballscrew(2-step gear)	Z axis=920	150~1,070 (Standard Column)			100~1,020 (Standard Column)		
		Z axis=1,020	250~1,270 (Column Heightened 200mm)			200~1,220 (Column Heightened 200mm)		
	Linear way, Enclosed Box Ram/ Dual ballscrews (2-step gear/Direct-driven)	Z axis=1,000	150~1,150 (Standard Column)			100~1,100 (Standard Column)		
		Z axis=1,200	150~1,350 (Column Heightened 200mm)			100~1,300 (Column Heightened 200mm)		
	Z axis=1,400	150~1,550 (Column Heightened 400mm)			100~1,500 (Column Heightened 400mm)			
Distance between columns	mm	3,250						
TABLE								
Table size (X direction x Y direction)	mm	3,000 x 2,450	4,000 x 2,450	5,000 x 2,450	6,000 x 2,450	8,000 x 2,450	10,000 x 2,450	
T-slot (width x number x pitch)	mm	28 x 13 x 200 (150)						
Max. table load	kg	15,000	18,000	20,000	22,000	24,000	26,000	
SPINDLE								
Spindle speed	Box way/single ballscrew	2-step gear	rpm					4,000 / 6,000(Opt.)
	Linear way & enclosed box ram / dual ballscrews	2-step gear	rpm					4,000(Opt.) / 6,000(Opt.)
		Direct driven	rpm					10,000(Opt.)
Spindle power (cont. / 30 min.)	kW	18.5 / 22(22 / 26 Opt.)(30 / 37 Opt.)						
Spindle taper	-	BBT-50						
FEED								
Cutting feed rate	mm/min	1~10,000	1~10,000	1~10,000	1~10,000	1~7,000	1~7,000	
Rapid traverse	X/Y(Y+700)		m/min	20 / 15 (15)	18 / 15 (15)	12.5 / 15 (15)	10 / 15 (15)	8 / 15 (15)
	Z axis	Box way / single ballscrew	m/min	15				
		Linear way / dual ballscrews	m/min	12				
	Enclosed box ram / dual ballscrews	m/min	12					
ACCURACY								
Positioning accuracy (JIS B6333)	mm	±0.010 / Full travel	±0.010 / Full travel	±0.010 / Full travel	±0.012 / Full travel	±0.012 / Full travel	±0.015 / Full travel	
Positioning accuracy (ISO-230-2 & VDI 3441)	mm	P0.022	P0.022	P0.032	P0.042	P0.042	P0.045	
Repeatability (JIS B6333)	mm	±0.003	±0.003	±0.003	±0.003	±0.003	±0.003	
Repeatability (ISO-230-2 & VDI 3441)	mm	Ps0.016	Ps0.016	Ps0.025	Ps0.033	Ps0.033	Ps0.035	
ATC¹								
Tool magazine capacity	Vertical type tool change	pcs	32 / 40(Opt.) / 60(Opt.)					
	Floor-standing vertical type tool change	pcs	32(Opt.) / 40(Opt.) / 60(Opt.)					
	Floor-standing vertical-horizontal type tool change	pcs	32(Opt.) / 40(Opt.) / 60(Opt.)					
Max. tool diameter (full / next pockets empty)	mm	∅125 / ∅245						
Max. tool length	mm	450						
Max. tool weight	kg	20						
Tool shank	-	BBT-50						
Pull stud	-	P50T-1						
GENERAL								
Power requirement	kVA	60						
Pneumatic requirement	kg/cm ²	6						
Machine net weight ²	kg	40,500 / 42,500	44,500 / 48,000	50,500 / 54,000	55,500 / 58,500	64,500 / 68,500	73,500 / 78,500	
Floor space 3 (LxWxH)	Vertical type tool change	m	11.2 x 7.8 x 4.9	13.2 x 7.8 x 4.9	15.2 x 7.8 x 4.9	17.2 x 7.8 x 4.9	22 x 7.8 x 4.9	26 x 7.8 x 4.9
	Floor-standing vertical type tool change	m	11.2 x 9.4 x 4.9	13.2 x 9.4 x 4.9	15.2 x 9.4 x 4.9	17.2 x 9.4 x 4.9	22 x 9.4 x 4.9	26 x 9.4 x 4.9
	Floor-standing vertical-horizontal type tool change	m	11.2 x 10 x 5.2	13.2 x 10 x 5.2	15.2 x 10 x 5.2	17.2 x 10 x 5.2	22 x 10 x 5.2	26 x 10 x 5.2

Note: 1. Max. pocket support torque: 2.5 kgf-m
 2. Machine weight is for standard machine and is subject to variation according to the accessories selected.
 3. Machine height is for the standard Z axis configuration (box way / single ball screw), which will be affected by the configuration of Z axis.
 For machine height of other models, please contact the relevant personnel.

HF Specification | HF-xx35/42 Series

MODEL	Unit	HF-4035/ HF-4042	HF-5035/ HF-5042	HF-6035/ HF-6042	HF-8035/ HF-8042	HF-10035/ HF-10042	
TRAVEL							
X axis travel	mm	4,100	5,100	6,100	8,100	10,100	
Y axis travel	mm	3,500 / 4,200					
Z axis travel	Box way / single ballscrew	920 / 1,020(Opt.)					
	Linear way, Enclosed Box Ram/Dual ballscrews	1,000(Opt.) / 1,200(Opt.) / 1,400(Opt.)					
Distance from spindle nose to table	Box way/ single ballscrew(2-step gear)	Z axis=920	270~1,190 (Standard Column)			170~1,190 (Standard Column)	
		Z axis=1,020	270~1,190 (Standard Column)			170~1,190 (Standard Column)	
	Linear way, Enclosed Box Ram/ Dual ballscrews (2-step gear/Direct-driven)	Z axis=1,000	270~1,270 (Standard Column)			270~1,270 (Standard Column)	
		Z axis=1,200	270~1,470 (Column Heightened 200mm)			270~1,470 (Column Heightened 200mm)	
	Z axis=1,400	270~1,670 (Column Heightened 400mm)			270~1,670 (Column Heightened 400mm)		
Distance between columns	mm	3,520					
TABLE							
Table size (X direction x Y direction)	mm	4,000 x 3,000	5,000 x 3,000	6,000 x 3,000	8,000 x 3,000	10,000 x 3,000	
T-slot (width x number x pitch)	mm	28 x 13 x 250 (150)					
Max. table load	kg	20,000	24,000	28,000	32,000	36,000	
SPINDLE							
Spindle speed	Box way/single ballscrew	2-step gear	rpm				4,000 / 6,000(Opt.)
	Linear way & enclosed box ram / dual ballscrews	2-step gear	rpm				4,000(Opt.) / 6,000(Opt.)
		Direct driven	rpm				10,000(Opt.)
Spindle power (cont. / 30 min.)	kW	22 / 26 (30 / 37 Opt.)					
Spindle taper	-	BBT-50					
FEED							
Cutting feed rate	mm/min	1~7,000					
Rapid traverse	X/Y(Y+700)		m/min	10 / 10 (10)	10 / 10 (10)	8 / 10 (10)	8 / 10 (10)
	Z axis	Box way / single ballscrew	m/min	15			
		Linear way / dual ballscrews	m/min	12			
	Enclosed box ram / dual ballscrews	m/min	12				
ACCURACY							
Positioning accuracy (JIS B6333)	mm	±0.013 / Full travel	±0.013 / Full travel	±0.013 / Full travel	±0.015 / Full travel	±0.015 / Full travel	
Positioning accuracy (ISO-230-2 & VDI 3441)	mm	P0.040	P0.040	P0.040	P0.045	P0.050	
Repeatability (JIS B6333)	mm	±0.003	±0.003	±0.003	±0.003	±0.003	
Repeatability (ISO-230-2 & VDI 3441)	mm	Ps0.028	Ps0.028	Ps0.030	Ps0.035	Ps0.040	
ATC¹							
Tool magazine capacity	Vertical type tool change	pcs	32 / 40(Opt.) / 60(Opt.)				
	Floor-standing vertical type tool change	pcs	32(Opt.) / 40(Opt.) / 60(Opt.)				
	Floor-standing vertical-horizontal type tool change	pcs	32(Opt.) / 40(Opt.) / 60(Opt.)				
Max. tool diameter (full / next pockets empty)	mm	∅125 / ∅245					
Max. tool length	mm	450					
Max. tool weight	kg	20					
Tool shank	-	BBT-50					
Pull stud	-	P50T-1					
GENERAL							
Power requirement	kVA	65					
Pneumatic requirement	kg/cm ²	6					
Machine net weight ²	kg	57,000 / 59,000	63,000 / 65,000	69,000 / 71,000	83,000 / 85,000	99,000 / 100,000	
Floor space 3 (LxWxH)	Vertical type tool change	m	14 x 8.2 x 5.1	16 x 8.2 x 5.1	18 x 8.2 x 5.1	23 x 8.2 x 5.1	28 x 8.2 x 5.1
	Floor-standing vertical type tool change	m	14 x 9.4 x 5.1	16 x 9.4 x 5.1	18 x 9.4 x 5.1	23 x 9.4 x 5.1	28 x 9.4 x 5.1
	Floor-standing vertical-horizontal type tool change	m	14 x 10 x 5.2	16 x 10 x 5.2	18 x 10 x 5.2	23 x 10 x 5.2	28 x 10 x 5.2

Note: 1. Max. pocket support torque: 2.5 kgf-m
 2. Machine weight is for standard machine and is subject to variation according to the accessories selected.
 3. Machine height is for the standard Z axis configuration (box way / single ball screw), which will be affected by the configuration of Z axis.
 For machine height of other models, please contact the relevant personnel.

HF Specification | HF-xx40/47 Series

MODEL	Unit	HF-4040/ HF-4047	HF-5040/ HF-5047	HF-6040/ HF-6047	HF-8040/ HF-8047	HF-10040/ HF-10047	
TRAVEL							
X axis travel	mm	4,100	5,100	6,100	8,100	10,100	
Y axis travel	mm	4,000 / 4,700					
Z axis travel	Box way / single ballscrew	920 / 1,020(Opt.)					
	Linear way, Enclosed Box Ram/Dual ballscrews	1,000(Opt.) / 1,200(Opt.) / 1,400(Opt.)					
Distance from spindle nose to table	Box way/ single ballscrew(2-step gear)	Z axis=920	270~1,190 (Standard Column)				
		Z axis=1,020	170~1,190 (Standard Column)				
	Linear way, Enclosed Box Ram/ Dual ballscrews (2-step gear/Direct-driven)	Z axis=1,000	270~1,270 (Standard Column)				
		Z axis=1,200	270~1,470 (Column Heightened 200mm)				
	Z axis=1,400	270~1,670 (Column Heightened 400mm)					
Distance between columns	mm	4,020					
TABLE							
Table size (X direction x Y direction)	mm	4,000 x 3,500	5,000 x 3,500	6,000 x 3,500	8,000 x 3,500	10,000 x 3,500	
T-slot (width x number x pitch)	mm	28 x 15 x 250 (150)					
Max. table load	kg	20,000	24,000	28,000	32,000	36,000	
SPINDLE							
Spindle speed	Box way/single ballscrew	2-step gear	rpm 4,000 / 6,000(Opt.)				
	Linear way & enclosed box ram / dual ballscrews	2-step gear	rpm 4,000(Opt.) / 6,000(Opt.)				
		Direct driven	rpm 10,000(Opt.)				
Spindle power (cont. / 30 min.)	kW	22 / 26 (30 / 37 Opt.)					
Spindle taper	-	BBT-50					
FEED							
Cutting feed rate	mm/min	1~7,000					
Rapid traverse	X/Y(Y+700)	m/min	10 / 10 (10)	10 / 10 (10)	8 / 10 (10)	8 / 10 (10)	
	Z axis	Box way / single ballscrew Linear way / dual ballscrews	m/min 15				
		Enclosed box ram / dual ballscrews	m/min 12				
ACCURACY							
Positioning accuracy (JIS B6333)	mm	±0.013 / Full travel	±0.013 / Full travel	±0.013 / Full travel	±0.015 / Full travel	±0.015 / Full travel	
Positioning accuracy (ISO-230-2 & VDI 3441)	mm	P0.040	P0.040	P0.040	P0.045	P0.050	
Repeatability (JIS B6333)	mm	±0.003	±0.003	±0.003	±0.003	±0.003	
Repeatability (ISO-230-2 & VDI 3441)	mm	Ps0.028	Ps0.028	Ps0.030	Ps0.035	Ps0.040	
ATC 1							
Tool magazine capacity	Vertical type tool change	pcs	32 / 40(Opt.) / 60(Opt.)				
	Floor-standing vertical type tool change	pcs	32(Opt.) / 40(Opt.) / 60(Opt.)				
	Floor-standing vertical-horizontal type tool change	pcs	32(Opt.) / 40(Opt.) / 60(Opt.)				
Max. tool diameter (full / next pockets empty)	mm	∅125 / ∅245					
Max. tool length	mm	450					
Max. tool weight	kg	20					
Tool shank	-	BBT-50					
Pull stud	-	P50T-1					
GENERAL							
Power requirement	kVA	65					
Pneumatic requirement	kg/cm ²	6					
Machine net weight 2	kg	58,000 / 60,000	64,000 / 66,000	70,000 / 72,000	84,000 / 86,000	100,000 / 101,000	
Floor space 3 (LxWxH)	Vertical type tool change	m	14 x 8.7 x 5.1	16 x 8.7 x 5.1	18 x 8.7 x 5.1	24 x 8.7 x 5.1	28.5 x 8.7 x 5.1
	Floor-standing vertical type tool change	m	14 x 10 x 5.1	16 x 10 x 5.1	18 x 10 x 5.1	24 x 10 x 5.1	28.5 x 10 x 5.1
	Floor-standing vertical-horizontal type tool change	m	14 x 10.5 x 5.2	16 x 10.5 x 5.2	18 x 10.5 x 5.2	24 x 10.5 x 5.2	28.5 x 10.5 x 5.2

Note: 1. Max. pocket support torque: 2.5 kgf-m
 2. Machine weight is for standard machine and is subject to variation according to the accessories selected.
 3. Machine height is for the standard Z axis configuration (box way / single ball screw), which will be affected by the configuration of Z axis.
 For machine height of other models, please contact the relevant personnel.

NF / HF Standard & Optional Accessories

Standard

- FANUC 0IMF Plus Controller
- Box way 4,000 rpm 2-step gear type spindle
- Z axis travel 920 mm (Box way)
- Spindle cooling system
- Air blast through spindle
- Footswitch for tool clamping
- X/Y/Z axis absolute pulse coder feedback
- X/Y/Z axis travel hard limits protection
- Twin hydraulic cylinders with pressured nitrogen counterbalance system for Z axis
- X/Y axis ballscrew supporting device (X axis travel ≥ 4 m, Y axis travel ≥ 3 m)
- Cutting fluid system (including pump & coolant tank)
- Centralized auto lubrication system
- Independent lubrication oil collector for 3 axes
- Vertical type tool magazine 32 tools
- Enclosed sheet metal guard (without roof) (NF series X axis ≤ 6 m)
- Sheet metal guard (four-piece type) (NF series X axis ≥ 8 m) (all HF series)
- Swiveling arm type operation panel
- Movable manual pulse generator
- Screw type chip augers on table sides
- Steel belt chip conveyor
- Heat exchanger for electrical cabinet
- Wash gun and pneumatic interface
- Vision Wide FX graphical user interface (only for FANUC Controller)
- Auto power off function
- RJ45 interface
- Working lamp
- Operation cycle finish and alarm light
- Spindle overloading protected by software
- Foundation pads and bolts kits
- Adjustment tool and tool kits
- Technical manuals (operation, maintenance manual and circuit diagram)

Optional

- FANUC 31iB / HEIDENHAIN TNC 640 / SIEMENS 828D / SIEMENS ONE / MITSUBISHI M80 TypeA / MITSUBISHI M830S Controller
- Box way 6,000 rpm 2-step gear spindle
- Linear way/enclosed box ram 4,000/6,000 rpm 2-step gear spindle
- Linear way/enclosed box ram 10,000/12,000 rpm direct driven spindle
- Z axis travel 1,020 mm (Box way)
- Z axis travel 1,000 / 1,200 / 1,400 mm (linear way / enclosed box ram)
- Column heightened 200 / 400 / 600 / 800 mm
- Spindle ring cutting coolant device (vertical spindle / for no head attachment)
- Coolant through spindle system 20 / 70 bar
- The interface of coolant through spindle
- Coolant through tool holder system 5 / 18 bar
- Coolant through tool holder interface
- Button for tool clamping
- Spindle temperature thermal compensation system (STC)
- X/Y/Z axis linear scale
- Oil skimmer
- Oil mist cooling device (MQL)
- Oil mist collector
- Vertical type tool magazine 40 / 60 tools
- Floor-standing vertical type tool magazine 32 / 40 / 60 tools
- Floor-standing vertical-horizontal type tool magazine 32 / 40 / 60 tools
- Wireless manual pulse generator
- Sheet metal guard (four-piece type) (NF series X axis ≤ 6 m)
- Enclosed sheet metal guard (without roof) (NF series X axis ≥ 8 m) (all HF series)
- Enclosed sheet metal guard (with roof) (NF series X axis ≤ 6 m) (not for NF-xx32/39 and HF series)
- X/Y/Z axis independent manual pulse generator (only for FANUC)
- Helical blade chip augers on table sides
- Drum type chip conveyor
- Dual belt type chip conveyor
- Chip cart
- Air conditioner for electrical cabinet
- Auto workpiece measurement
- Auto tool measurement
- Rotary table
- Sub working table
- Interface reserved for fourth axis (hydraulic device and electrical interface)
- Transformer
- Auto warm up
- Tool axis retract function at power failure
- CE Regulation

Optional Accessories for Auto Head Attachments

- Auto AC 90° angular head / AC 2-axis head / AC extended head
- Auto AC milling head / small head / customized head attachment
- CTS interface is available on AC 90° angular head, AC 2-axis head and AC extended head. (Air through spindle is not available.)
- Floor-standing vertical-horizontal type tool magazine 40 / 60 / 90 tools(Only for NF-xx30 / 33 / 39 \ HF-xx42/47 series)
- Manual swiveling arm type head bracket on operation side (one head attachment)
- Auto swiveling arm type head bracket on operation side (one head attachment and one cover)
- Multi-heads magazine on magazine side (Only for NF-xx30 / 33 / 39 \ HF-xx42/47 series)

*For the specification of each model, please contact our sales representatives.